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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/082,227 | 02/26/2002 | Hisae Yoshizawa | 112046 | 2635 |
| 25944 | 7590 | 04/19/2005 | EXAMINER | |
| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | LISH, PETER J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1754 | |
| DATE MAILED: 04/19/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/082,227

Applicant(s)

YOSHIZAWA ET AL.

Examiner

Peter J. Lish

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102/103

Claim 26 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ebbesen (*Carbon Nanotubes: Preparation and Properties*), with Niu et al. (US 2003/0039604 A1) to show a state of fact.

The rejection of the previous office action is maintained in its entirety and incorporated herein by reference.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niu et al. (US 2003/0039604 A1) taken with Ebbesen (*Carbon Nanotubes: Preparation and Properties*).

The rejection of the previous office action is maintained in its entirety and incorporated herein by reference.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ebbesen (*Carbon Nanotubes: Preparation and Properties*) with Niu et al. (US 2003/0039604 A1) to show a state of fact, and further in view of Baughman et al. (US 6,555,945).

The teachings of Ebbesen with Niu et al. are maintained from the previous office action and incorporated herein by reference. Neither Ebbesen nor Niu et al. teach the use of the nanonetwork as an electrical conductor. Baughman, however, teaches that filtering a dispersion

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of nanotubes (either single-walled or multi-walled) forms nanosheets, which appear to be identical to the nanonetworks formed by Ebbesen. These nanosheets are then applied to a substrate and used as a conducting material, or an electrode. It would have been obvious to one of ordinary skill at the time of invention to use the nanonetworks produced by the process of Ebbesen as a conductive layer on a substrate, as taught by Baughman et al., in order to take advantage of their conductive properties.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Niu et al. (US 2003/0039604 A1) taken with Ebbesen (*Carbon Nanotubes: Preparation and Properties*), and further in view of Baughman et al. (US 6,555,945).

The teachings of Niu et al. taken with Ebbesen are maintained from the previous office action and incorporated herein by reference. Neither Niu et al. nor Ebbesen teach the use of the nanonetwork as an electrical conductor. Baughman, however, teaches that filtering a dispersion of nanotubes (either single-walled or multi-walled) forms nanosheets, which appear to be identical to the nanonetworks formed by Niu et al. taken with Ebbesen. These nanosheets are then applied to a substrate and used as a conducting material, or an electrode. It would have been obvious to one of ordinary skill at the time of invention to use the nanonetworks produced by the process of Niu et al. taken with Ebbesen as a conductive layer on a substrate, as taught by Baughman et al., in order to take advantage of their conductive properties.

Response to Arguments

Applicant's arguments filed 1/31/05 have been fully considered but they are not persuasive. The applicant argues that the references to Ebbesen and Niu do not teach, nor suggest, the step of applying the dispersion to a substrate to form a film or the step of using the nanonetwork as an electrical conductor. As stated in the previous office action, the step of filtering the dispersion results in the formation of a film on the filter, which is seen to act as a substrate. Regarding the process step of using the nanonetwork as an electrical conductor, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

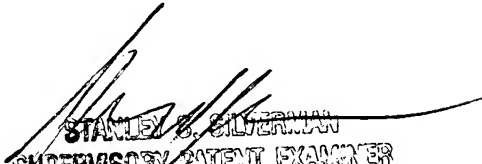
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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Lish whose telephone number is 571-272-1354. The examiner can normally be reached on 9:00-6:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

PL


STANLEY B. SILVERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700